



# CR3

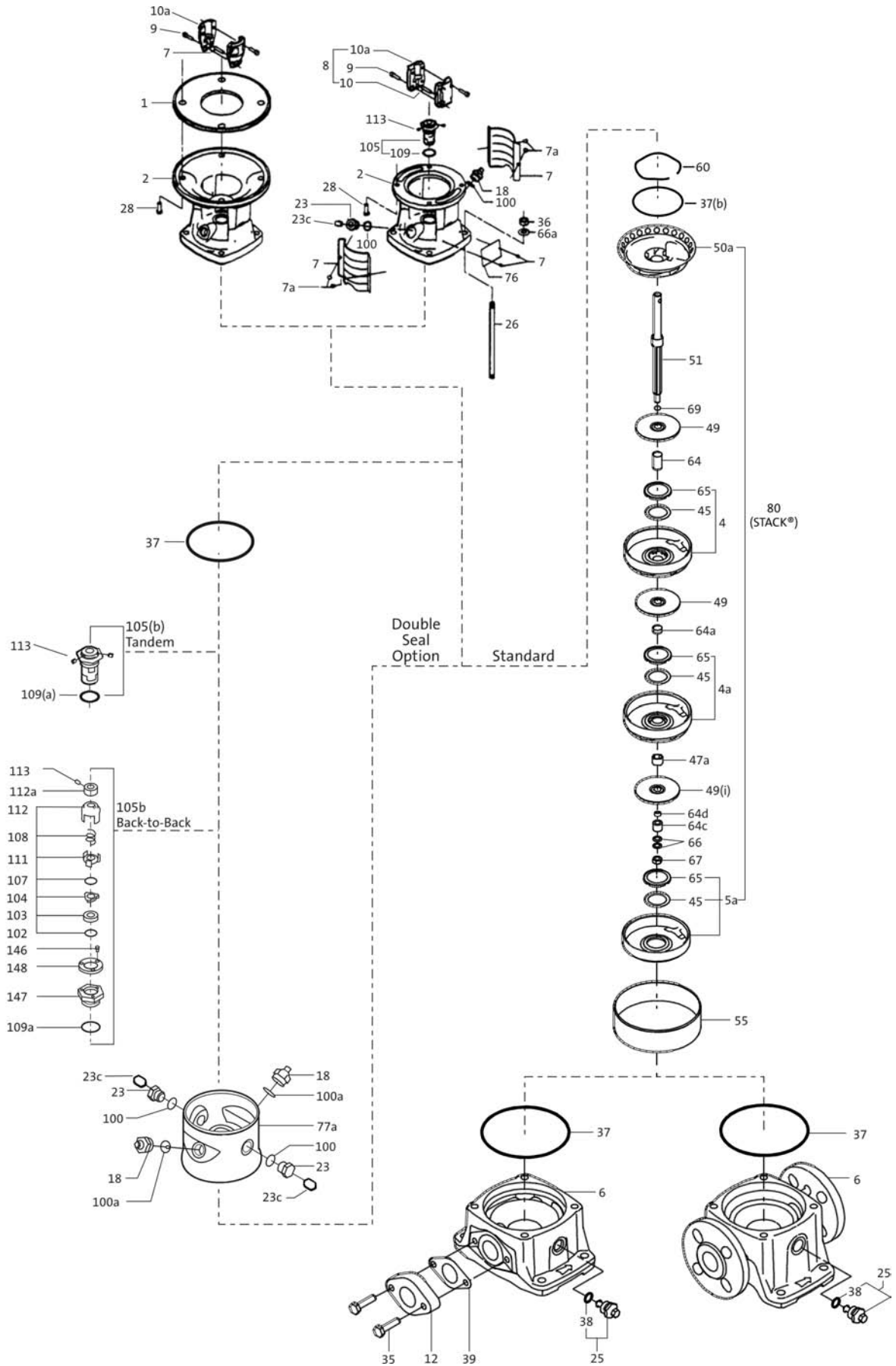
## Parts List & Kits

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Parts List  
Spare Part Kits  
Accessories  
Special Tools  
Standard Tools  
Tools for Torques

# Exploded View CR3



Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
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**PARTS LIST**

1	Adapter for Motor Stool				For NEMA, 213/215TC, 7.5 - 10HP	96476208		No
2	Motor Stool		3/2-12	1	NEMA, 56C, 1/3 - 2HP	96436501		No
			13-25	1	NEMA, 182/184TC, 3 - 5HP	96436502		No
			3/2-7	1	Add Pos. 1, NEMA, 213TC, 7.5 - 10HP	96436502		No
					IEC, F85, MG 71, .37 - .55kW	96436495		No
			8-15	1	IEC, F100, MG 80, .75 - 1.1kW	96436496		No
			17-29	1	IEC, F115, MG 90, 1.5 - 2.2kW	96436499		No
			31-36	1	IEC, F130, MG 100/112, 3.0 - 4.0 kW	96436500		No
4	Chamber, Complete with Pos.45 & 65		3/2-36	^^^	IEC, F265, MG132, 5.5 - 7.5kW	96436505		No
4a	Chamber Cpl. w/Pos.45 & 65 & Bearing		3/2-36	^^^^	PTFE Pos.45	96439480		No
	Chamber Cpl. w/Pos.45 & 65 & Brg. (option)		3/2-36	^^^^	Silicon Carbide Brg, PTFE Pos.45	96439475		YES
			3/2-36	^^^^	Bronze Bearing, PTFE Pos.45	96440612		YES
5a	Chamber, Bottom Complete with Pos.45 & 65		3/2-36	1	Graffon Bearing, PTFE Pos.45	96440615		YES
	Chmb. Btm. Cpl. w/Pos.45 & 65 (Low NPSH opt.)		3/2-36	1	PTFE Pos.45	96439484		No
6	Base		3/2-17	1	PTFE Pos.45	96465891		No
			3/2-36	1	Oval (max 232 PSI)	96436516		No
			3/2-17	1	JIS, FGJ, ANSI (Max 362 PSI)	96442012		No
7	Coupling Guard		3/2-36	2	IEC, F85-F100	96438136		No
				2	NEMA-56C, IEC-F115,130, & 265	96438137		No
				2	NEMA, 182-215TC	96438138		No
7a	Screw for Coupling Guard		3/2-36	4	M4 x 8mm	96488481		No
9	Allen Screw		3/2-19	4	M6 x 20mm, Delta Seal	00ID7899		YES
			21-27	4	M8 x 25mm, Delta Seal	00ID7900		YES
				4	M10 x 25mm, Delta Seal	00ID7901		YES
10	Shaft Pin		3/2-36	1	ø5 x 26mm	310192		YES
10a	Coupling Half		3/2-12	2	NEMA, 56C, 1/3 - 2HP. ø15.8 / ø12	410108		YES
			13-25	2	NEMA, 182/184TC, 3-5HP. ø28.5/ø12	410109		YES
				2	NEMA, 213TC, 7.5-10HP. ø34.9/ø12	96472175		YES
			3/2-7	2	IEC, F85, MG71, .37-.55kW. ø14/ø12	410041		YES
			8-15	2	IEC, F100, MG80,.75-1.1kW. ø19/ø12	410043		YES
			17-29	2	IEC, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045		YES
			31-36	2	IEC, F130, MG100/112, 3-4 kW.ø28/ø12	410047		YES
					IEC, F265, MG132, 5.5-7.5kW. ø38/ø12	410115		YES
12	Oval Flange		3/2-17	2	Painted CI, 1" -11.5 NPT (max 232 PSI)	96468333		YES
			3/2-23	2	Painted CI, RP 1" BSP DIN (max 232 PSI)	400173		No
18	Priming/Vent Plug		3/2-36	*	G 1/2A, NV24 with NV9 x M8 stem	405150		No
23	Plug		3/2-36	**	G 1/2A, w/1/4"port, NV24	91120659		No
	Plug (option)		3/2-36	**	G 1/2A, Solid no port, NV24	370025		No
23c	Pipe Plug for Pos.23 & 25 with hollow stem		3/2-36	**	1/4" NPT,SS SQHD	00ID7216		No
25	Drain/Priming Plug Cpl. with O-rings		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, EPDM	96440608		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FKM	96440609		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 stem, FFKM	96486530		No
	Dr./Pr. Plug Cpl. for gauge, w/O-rings (option)		3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, EPDM	96527046		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FKM	96527047		No
			3/2-36	1	G 1/2A, NV24 w/NV9 x M8 hollow stem, FFKM	96527049		No
26	Staybolt		3/2-3	4	M12 x 79mm	404002		No
			4	4	M12 x 97mm	414002		No
			5	4	M12 x 115mm	404004		No
			6	4	M12 x 133mm	404005		No
			7	4	M12 x 151mm	414004		No
			8	4	M12 x 169mm	404007		No
			9	4	M12 x 187mm	404008		No
			10	4	M12 x 205mm	414006		No
			11	4	M12 x 223mm	404010		No
			12	4	M12 x 241mm	404011		No
			13	4	M12 x 259mm	414008		No
			15	4	M12 x 294mm	96442754		No
			17	4	M12 x 330mm	96442760		No
			19	4	M12 x 367mm	414012		No
			21	4	M12 x 402mm	96442762		No
			23	4	M12 x 439mm	404022		No
			25	4	M12 x 475mm	414016		No
			27	4	M12 x 511mm (50Hz.)	404026		No
			29	4	M12 x 546mm (50Hz.)	96442765		No
			31	4	M12 x 583mm (50Hz.)	404030		No
			33	4	M12 x 618mm (50Hz.)	96442767		No
			36	4	M12 x 670mm (50Hz.)	96442768		No
	Staybolt (Back-to-Back & Tandem Seal option)		3/2-3	4	M12 x 187mm	404008		No
			4	4	M12 x 205mm	414006		No
			5	4	M12 x 223mm	404010		No
			6	4	M12 x 241mm	404011		No
			7	4	M12 x 259mm	414008		No
			8	4	M12 x 277mm	404013		No

Due to part changes over time, all position numbers (1-203) may not be used.

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Pos. No.	Part Description	Model	Stages	No. Used	Comments/Dimensions	B.O.M. Ref. No.	Material No.	Included in kits ?
<b>PARTS LIST</b>								
26	Staybolt (Back-to-Back & Tandem Seal option)		9	4	M12 x 294mm	96442754		No
			10	4	M12 x 313mm	414010		No
			11	4	M12 x 330mm	96442760		No
			12	4	M12 x 340mm	414011		No
			13	4	M12 x 367mm	414012		No
			15	4	M12 x 402mm	96442762		No
			17	4	M12 x 436mm	96458181		No
			19	4	M12 x 475mm	414016		No
			21	4	M12 x 511mm	404026		No
			23	4	M12 x 546mm	96442765		No
			25	4	M12 x 583mm	404030		No
			27	4	M12 x 618mm (50Hz.)	96442767		No
			29	4	M12 x 655mm (50Hz.)	96458442		No
			31	4	M12 x 691mm (50Hz.)	96442777		No
			33	4	M12 x 724mm (50Hz.)	96442769		No
			36	4	M12 x 778mm (50Hz.)	96458444		No
28	Motor Bolt		3/2-12	4	NEMA, 56C, 1/3 - 2HP. UNC 3/8" x 25mm	00ID1839		No
			13-25	4	NEMA, 182/184TC, 3 - 5HP.UNC1/2" x 25mm	00ID1840		No
					NEMA, 213TC, 7.5-10HP. UNC 1/2" x 1.25"	91128631		No
			3/2-7	4	IEC, F85, MG71, .37-.55kW. M6 x 20mm	00ID8022		No
			8-15	4	IEC, F100, MG80,.75-1.1kW. M6 x 25mm	00ID8023		No
			17-29	4	IEC, F115, MG 90, 1.5-2.2kW. M8 x 20mm	00ID8024		No
			31-36	4	IEC, F130, MG100/112, 3-4 kW. M8 x 25mm	00ID8025		No
				IEC, F265, MG132, 5.5-7.5kW. M12 x 45mm	00ID7914		No	
35	Hexagon Head Screw for Oval Flange		3/2-17	4	M10 x 40mm, Delta Seal	00ID8027		YES
36	Staybolt Nut		3/2-36	4	19mm x M12, Delta Seal	00ID7917		No
37	Sleeve O-ring		3/2-36	◆◆	EPDM, ø137.5 x 3.3mm	96438743		YES
37b	Sleeve O-ring (option)		3/2-36	◆◆	FKM, ø137.5 x 3.3mm	96438744		YES
			3/2-36	◆◆	FXM, ø137.5 x 3.3mm	96458109		YES
38	Drain Plug O-ring		3/2-36	◆◆	FFKM, ø136.12 x 3.53mm	96466718		YES
			3/2-36	1	EPDM, ø16.3 x 2.4mm	00ID1288		YES
			3/2-36	1	FKM, ø16.3 x 2.4mm	00ID2231		YES
	Drain Plug O-ring (option)		3/2-36	1	FFKM, ø16.3 x 2.4mm	96428162		YES
			3/2-36	1	FXM, ø16.3 x 2.4mm	96442869		YES
39	Gasket for Oval Flange		3/2-17	2	95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189		YES
45	Neck Ring		3/2-36	# stgs	ø41.3 x ø30.6 x .75mm, PTFE	400003		YES
47a	Bearing Ring/Spacer		3/2-36	^^^^	SiC 150, ø17.37 x ø13.10 x ø10.9 x 13mm	96437488		YES
			3/2-36	^^^^	TC, ø15.92 x ø13.10 x ø10.9 x 9.7mm	400041		YES
49	Impeller		3/2-36	# stgs-	ø73.6 x ø30.6 x 9.55mm (back-plate .5mm)	96433168		No
49i	Impeller (Low NPSH option)		3/2-36	1	ø73.0 x ø35.0 x 13.2mm (back-plate 1.0mm)	96437414		No
50a	Top Guide Vane		3-36	1		96439456		No
			3/2	1		96478562		No
51	Shaft, Complete		3/2-3	1	ø12 x 160.5mm	96439607		No
			4	1	ø12 x 180.5mm	96440386		No
			5	1	ø12 x 196.5mm	96440387		No
			6	1	ø12 x 214.5mm	96440388		No
			7	1	ø12 x 234.5mm	96440389		No
			8	1	ø12 x 250.5mm	96440390		No
			9	1	ø12 x 268.5mm	96440391		No
			10	1	ø12 x 288.5mm	96440392		No
			11	1	ø12 x 304.5mm	96440393		No
			12	1	ø12 x 322.5mm	96440394		No
			13	1	ø12 x 342.5mm	96440395		No
			15	1	ø12 x 376.5mm	96440396		No
			17	1	ø12 x 412.5mm	96440398		No
			19	1	ø12 x 450.5mm	96440400		No
			21	1	ø12 x 484.5mm	96440401		No
			23	1	ø12 x 520.5mm	96440403		No
			25	1	ø12 x 556.5mm	96440405		No
			27	1	ø12 x 592.5mm (50 Hz.)	96440406		No
			29	1	ø12 x 628.5mm (50 Hz.)	96440407		No
			31	1	ø12 x 664.5mm (50 Hz.)	96440409		No
			33	1	ø12 x 700.5mm (50 Hz.)	96440410		No
36	1	ø12 x 754.5mm (50 Hz.)	96440411		No			
	Shaft, Cpl. (Back-to-Back & Tandem Seal option)		3/2-3	1	ø12 x 265.5mm	96457560		No
			4	1	ø12 x 285.5mm	96457561		No
			5	1	ø12 x 301.5mm	96457562		No
			6	1	ø12 x 319.5mm	96457563		No
			7	1	ø12 x 339.5mm	96457564		No
			8	1	ø12 x 355.5mm	96457565		No
			9	1	ø12 x 373.5mm	96457566		No
			10	1	ø12 x 393.5mm	96457567		No
			11	1	ø12 x 409.5mm	96457568		No

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**PARTS LIST**

51	Shaft, Cpl. (Back-to-Back & Tandem Seal option)			12	1	∅12 x 427.5mm	96457569	No
				13	1	∅12 x 447.5mm	96457570	No
				15	1	∅12 x 481.5mm	96457571	No
				17	1	∅12 x 517.5mm	96457573	No
				19	1	∅12 x 555.5mm	96457575	No
				21	1	∅12 x 589.5mm	96457576	No
				23	1	∅12 x 625.5mm	96457578	No
				25	1	∅12 x 661.5mm	96457580	No
				27	1	∅12 x 697.5mm (50 Hz.)	96457581	No
				29	1	∅12 x 733.5mm (50 Hz.)	96457582	No
				31	1	∅12 x 769.5mm (50 Hz.)	96457584	No
				33	1	∅12 x 805.5mm (50 Hz.)	96457585	No
				36	1	∅12 x 859.5mm (50 Hz.)	96457586	No
				55	Outer Sleeve			3/2-3
4	1	∅138 x 62.6mm	96440010					No
5	1	∅138 x 80.6mm	96441510					No
6	1	∅138 x 98.6mm	96439999					No
7	1	∅138 x 116.6mm	96441511					No
8	1	∅138 x 134.6mm	96441513					No
9	1	∅138 x 152.6mm	96440000					No
10	1	∅138 x 170.6mm	96441514					No
11	1	∅138 x 188.6mm	96441516					No
12	1	∅138 x 206.6mm	96440001					No
13	1	∅138 x 224.6mm	96441517					No
15	1	∅138 x 260.6mm	96440002					No
17	1	∅138 x 296.6mm	96441520					No
19	1	∅138 x 332.6mm	96441521					No
21	1	∅138 x 368.6mm	96440004					No
23	1	∅138 x 404.6mm	96441524					No
25	1	∅138 x 440.6mm	96441525					No
27	1	∅138 x 476.6mm (50 Hz.)	96440006					No
29	1	∅138 x 512.6mm (50 Hz.)	96441526					No
31	1	∅138 x 548.6mm (50 Hz.)	96441527					No
33	1	∅138 x 584.6mm (50 Hz.)	96440008	No				
36	1	∅138 x 638.6mm (50 Hz.)	96439652	No				
60	Stack Compression Spring			3/2-36	1	∅136 x 3.5mm	96439662	No
64	Spacing Pipe			2-36	^^^	∅15.85 x ∅12.85 x 17.52mm	400035	No
64a	Spacing Pipe			3/2-36	^^^^	∅15.85 x ∅12.85 x 4.5mm	96440292	YES
	Spacing Pipe (option for Graflon / Brz. 4a)			3/2-36	^^^^	Use with TC Pos.47a, ∅15 x ∅12.7 x 7.8mm	400016	YES
64c	Clamp, Splined			3/2-36	1	∅15 x ∅13.10 x ∅10.9 x 13mm	96439668	YES
65	Neck Ring Retainer			3/2-36	# stgs	∅43.5 x ∅34.0 x 3.6mm	96438746	YES
66	Lock Washer Set for Shaft			3/2-36	1	∅13.5 x ∅8.2 x 2.6mm	96417297	YES
66a	Washer for Staybolt			3/2-36	4	DIN 125A, ∅24 x ∅13 x 2.5mm, Delta Seal	96430377	No
67	Lock Nut for Shaft			3/2-36	1	13mm x M8	00ID2061	YES
69	Spacing Pipe			3/2	1	∅15.85 x 12.85 x 18.0mm	400125	No
76	Nameplate			3/2-36	1	304SS, 60 x 45mm	96439820	No
76a	Rivet for Nameplate			3/2-36	2	304SS, ∅3 x 5mm	96022882	No
77a	Pump Head Cov. for Back-to-Back , Tandem Seal			3/2-36	1	Cast Stainless	96456293	YES
100	Priming/Vent Plug O-ring			3/2-36	■	EPDM, ∅16.3 x 2.4mm	00ID1288	No
				3/2-36	■	FKM, ∅16.3 x 2.4mm	00ID2231	YES
100a	Priming/Vent Plug O-ring (option)			3/2-36	■	FFKM, ∅16.3 x 2.4mm	96428162	No
				3/2-36	■	FXM, ∅16.3 x 2.4mm	96442869	No
102	O-ring for Pos. 105b Back-to-Back			3/2-36	1	EPDM, ∅18 x 2.5mm	00ID2041	YES
				3/2-36	1	FKM, ∅17.86 x 2.62mm	00ID2187	YES
	O-ring for Pos. 105b Back-to-Back (option)			3/2-36	1	FFKM, ∅17.86 x 2.62mm	96440281	No
				3/2-36	1	FXM, ∅17.86 x 2.62mm	96472584	No
103	Stationary Seal Ring for 105b Back-to-Back			3/2-36	1	TC, 12mm	980190	No
	Stationary Seal Ring for 105b Back-to-Back (opt.)			3/2-36	1	SiC, 12mm	980746	YES
104	Rotating Seal Ring for 105b Back-to-Back			3/2-36	1	TC, 12mm	980163	No
	Rotating Seal Ring for 105b Back-to-Back (opt.)			3/2-36	1	SiC, 12mm	980733	YES
105(b)	Shaft Seal HQBE			3/2-36	***	SiC, Carbon with resin-impregnated, EPDM	96441879	YES
	Shaft Seal HQBV			3/2-36	***	SiC, Carbon with resin-impregnated, FKM	96441880	YES
	Shaft Seal HQBK (option)			3/2-36	***	SiC, Carbon with resin-impregnated, FFKM	96489537	YES
	Shaft Seal HQQE			3/2-36	***	SiC, SiC, EPDM	96441877	YES
	Shaft Seal HQQV			3/2-36	***	SiC, SiC, FKM	96441878	YES
	Shaft Seal HQQF (option)			3/2-36	***	SiC, SiC, FXM	96472620	YES
	Shaft Seal HQQK (option)			3/2-36	***	SiC, SiC, FFKM	96464381	YES
	Shaft Seal HUBE			3/2-36	***	TC, Carbon with resin-impregnated, EPDM	96441873	YES
	Shaft Seal HUBV			3/2-36	***	TC, Carbon with resin-impregnated, FKM	96441874	YES
	Shaft Seal HUBF (option)			3/2-36	***	TC, Carbon with resin-impregnated, FXM	96481463	YES
	Shaft Seal HUBK (option)			3/2-36	***	TC, Carbon with resin-impregnated, FFKM	96481464	YES
	Shaft Seal HUUE			3/2-36	***	TC, TC, EPDM	96441875	YES

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<b>PARTS LIST</b>								
105(b)	Shaft Seal HUUUV		3/2-36	***	TC, TC, FKM	96441876		YES
	Shaft Seal HUUUF (option)		3/2-36	***	TC, TC, FXM	96475542		YES
	Shaft Seal HUUUK (option)		3/2-36	***	TC, TC, FFKM	96467885		YES
105b	Shaft Seal/inboard for Back-to-Back OQQE		3/2-36	1	SiC, SiC, EPDM	985200		YES
	Shaft Seal/inboard for Back-to-Back OQQV		3/2-36	1	SiC, SiC, FKM	985760		YES
	Shaft Seal/inboard for Back-to-Back OUUE		3/2-36	1	TC, TC, EPDM	985189		No
	Shaft Seal/inboard for Back-to-Back OUUV		3/2-36	1	TC, TC, FKM	985190		No
107	O-ring for Pos. 105b Back-to-Back		3/2-36	1	EPDM, ø11.5 x 4.3mm	00ID2040		YES
	O-ring for Pos. 105b Back-to-Back (option)		3/2-36	1	FKM, ø11.5 x 4.3mm	00ID2186		YES
			3/2-36	1	FFKM, ø11.5 x 4.3mm	96440282		No
			3/2-36	1	FXM, ø11.5 x 3.18mm	96472618		No
108	Spring for Pos. 105b Back-to-Back		3/2-36	1	12mm	980195		YES
109(a)	O-ring for Shaft Seal Pos. 105		3/2-36	1	EPDM, ø21.3 x 3.0mm	00ID1798		YES
			3/2-36	1	FKM, ø21.2 x 3.0mm	00ID2339		YES
109b	O-ring for Shaft Seal Pos. 105 (option)		3/2-36	1	FKM, ø22 x 2.75mm	96458111		YES
			3/2-36	1	FFKM, ø23.47 x 2.62mm	96464384		YES
111	Seal Driver (small) for Pos. 105b Back-to-Back		3/2-36	1		980192		YES
112	Seal Driver (large) for Pos. 105b Back-to-Back		3/2-36	1		980191		YES
112a	Seal Drv threaded for 112, Pos. 105b Back-to-Back		3/2-36	1		400203		YES
113	Set Screw for 112a, for Pos. 105b Back-to-Back		3/2-36	1	3mm x M5 x 6mm	00ID7392		YES
146	Allen Bolt for 147/148, for Pos. 105b Back-to-Back		3/2-36	1	2.5mm x M3 x 5mm	96462639		YES
147	Stationary Seal Retainer - Pos. 105b Back-to-Back		3/2-36	1	NV36, 316SS	96457354		No
148	Seal Retainer Washer - Pos. 105b Back-to-Back		3/2-36	1	316SS, ø36.0 x ø21.6 x 5.0mm	96457355		No

↑ Due to part changes over time, all position numbers (1-203) may not be used.

↑ These columns indicates which model uses the spare part. If blank, the part is used in all models.

## Notes:

- ^^^ 3/2 to 9 stage= # of Stages less 2  
10 to 19 stage= # of stages less 3  
21 to 27 stage = # of stages less 4  
29 to 36 stage = # of stages less 5
- ^^^ 3/2 to 9 stage= use 1  
10 to 19 stage= use 2  
21 to 27 stage = use 3  
29 to 36 stage = use 4
- \* Standard use 1. Back-to-Back or Tandem pump version use 3
- \*\* Standard use 1. Back-to-Back or Tandem pump version use 3
- \*\*\* 1 used in Hxxx (Standard), 2 used in Pxxx (Tandem) pump version
- # stgs- Use the number of stages in standard models, less one in de-staged and Low NPSH models
- ◆◆ Standard use 2. Back-to-Back or Tandem pump version use 3
- Standard use 2. Back-to-Back or Tandem pump version use 6

## Key to Symbols:

- KITS (YES)** ..... Recommended spare part
- ∅ ..... Diameter
- ANSI** ..... American National Standards Institute
- CPL** ..... Complete Assembly – these parts consist of more than one component
- EPDM** ..... Ethylene Propylene (also known as EPR and EPT) – an elastic substance similar to rubber
- FFKM** ..... Kalrez Elastomer made by DuPont
- FKM** ..... Fluoro Elastomer (generic for Viton)
- FXM** ..... Fluoraz Elastomer made by Greene Tweed
- M** ..... International standard thread size designation (thread diameter in mm)
- mm** ..... Millimeter
- MG** ..... Identifies Grundfos motor type/size
- N** ..... Stainless
- NBR** ..... Buna - N (also known as Nitrile) – an elastic substance similar to rubber
- NEMA** ..... National Electrical Manufacturers Association
- PTFE** ..... Teflon
- SiC** ..... Silicon Carbide
- TC** ..... Tungsten Carbide
- UNC** ..... Unified National Coarse – a standard for threads on bolts

## Spare Part Kits

Since certain pump parts can be expected to exhibit wear at the same time as related pump parts, they have been grouped into the following kits for your convenience. The numbers indicate the quantity of the part within each kit. Please order these kits using the kit material number at the top of the columns.

CR(I, N)15, 1, & 3 SiC Bearing						
WEAR PARTS KIT 2-9		Kit No.	96455095			
WEAR PARTS KIT 10-19		Kit No.	96455092			
WEAR PARTS KIT 20-27		Kit No.	96455093			
WEAR PARTS KIT 28-36		Kit No.	96455094			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber N Cpl. w/Pos.45 & 65 & SiC Bearing	96439476	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x $\phi$ 35 x 2mm	400189	2	2	2	2
45	Neck Ring, $\phi$ 41.3 x $\phi$ 30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, SiC 150, 13mm	96437488	1	2	3	4
64a	Spacing Pipe, $\phi$ 15.85 x $\phi$ 12.85 x 4.5mm	96440292	1	2	3	4
64c	Clamp, Splined, $\phi$ 15 x $\phi$ 13.10 x $\phi$ 10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, $\phi$ 43.5 x $\phi$ 34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, $\phi$ 13.5 x $\phi$ 8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

CR(I, N)15, 1, & 3 Graflon Bearing						
WEAR PARTS KIT 2-9		Kit No.	96460140			
WEAR PARTS KIT 10-19		Kit No.	96455110			
WEAR PARTS KIT 20-27		Kit No.	96455111			
WEAR PARTS KIT 28-36		Kit No.	96455112			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber N Cpl. w/Pos.45 & 65 & Graflon Bearing	96440615	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x $\phi$ 35 x 2mm	400189	2	2	2	2
45	Neck Ring, $\phi$ 41.3 x $\phi$ 30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, TC, 9.7mm	400041	1	2	3	4
64a	Spacing Pipe, $\phi$ 15.85 x $\phi$ 12.85 x 7.8mm	400016	1	2	3	4
64c	Clamp, Splined, $\phi$ 15 x $\phi$ 13.10 x $\phi$ 10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, $\phi$ 43.5 x $\phi$ 34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, $\phi$ 13.5 x $\phi$ 8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

CR(I)15, 1, & 3 Bronze Bearing						
WEAR PARTS KIT 2-9		Kit No.	96455102			
WEAR PARTS KIT 10-19		Kit No.	96455104			
WEAR PARTS KIT 20-27		Kit No.	96455105			
WEAR PARTS KIT 28-36		Kit No.	96455106			
Pos. No.	Description	Material No.	Qty. Included in each Kit			
4a	Chamber Cpl. w/Pos.45 & 65 & Bronze Bearing	96440612	1	2	3	4
39	Gasket for Oval Flange, 95 x 55 x $\phi$ 35 x 2mm	400189	2	2	2	2
45	Neck Ring, $\phi$ 41.3 x $\phi$ 30.6 x .75mm, PTFE	400003	8	17	24	32
47a	Bearing Ring/Spacer, TC, 9.7mm	400041	1	2	3	4
64a	Spacing Pipe, $\phi$ 15.85 x $\phi$ 12.85 x 7.8mm	400016	1	2	3	4
64c	Clamp, Splined, $\phi$ 15 x $\phi$ 13.10 x $\phi$ 10.9 x 13mm	96439668	1	1	1	1
65	Neck Ring Retainer, N, $\phi$ 43.5 x $\phi$ 34.0 x 3.6mm	96438746	8	17	24	32
66	Lock Washer Set of 2, $\phi$ 13.5 x $\phi$ 8.2 x 2.6mm	96417297	1	1	1	1
67	Lock Nut, 13mm x M8	00ID2061	1	1	1	1

GASKET KIT (EPDM)							Kit No.	96455090	
GASKET KIT (FKM)							Kit No.	96455091	
GASKET KIT (FXM)							Kit No.	96463944	
GASKET KIT (FFKM)							Kit No.	96533328	
GASKET KIT (EPDM)-Double Seal option.							Kit No.	96533362	
GASKET KIT (FKM)-Double Seal option.							Kit No.	96533363	
GASKET KIT (FFKM)-Double Seal option.							Kit No.	96533364	
Pos. No.	Description	Material No.	Qty. Included in each Kit						
37	Sleeve O-ring, EPDM, $\phi$ 137.5 x 3.3mm	96438743	2				3		
	Sleeve O-ring, FKM, $\phi$ 137.5 x 3.3mm	96438744		2				3	
37b	Sleeve O-ring, FXM, $\phi$ 137.5 x 3.3mm	96458109			2				
	Sleeve O-ring, FFKM, $\phi$ 136.12 x 3.53mm	96466718				2			3
38, 100(a)	Drain Plug O-ring, EPDM, $\phi$ 16.3 x 2.4mm	00ID1288	3				7		
	Drain Plug O-ring, FKM, $\phi$ 16.3 x 2.4mm	00ID2231		3				7	
38, 100a	Drain Plug O-ring, FXM, $\phi$ 16.3 x 2.4mm	96442869			3				
	Drain Plug O-ring, FFKM, $\phi$ 16.3 x 2.4mm	96428162				3			7
109(a)	O-ring for Pos.105(b) & 149, EPDM, $\phi$ 21.3 x 3.0mm	00ID1798	1				1		
	O-ring for Pos.105(b) & 149, FKM, $\phi$ 21.2 x 3.0mm	00ID2339		1				1	
109b	O-ring for Pos.105(b) & 149, FXM, $\phi$ 22.0 x 2.75mm	96458111			1				
	O-ring for Pos.105(b) & 149, FFKM, $\phi$ 23.47 x 2.62mm	96464384				1			2

STACK KITS	
Model	Material Number
CR(I)3-3/2	96453529
CR(I)3-3	96453530
CR(I)3-4	96453531
CR(I)3-5	96453532
CR(I)3-6	96453533
CR(I)3-7	96453534
CR(I)3-8	96453535
CR(I)3-9	96453536
CR(I)3-10	96453537
CR(I)3-11	96453538
CR(I)3-12	96453539
CR(I)3-13	96453540
CR(I)3-15	96453541
CR(I)3-17	96453542
CR(I)3-19	96453543
CR(I)3-21	96453544
CR(I)3-23	96453545
CR(I)3-25	96453546
CR(I)3-27	96453547
*** CR(I)3-29	96453548
*** CR(I)3-31	96453549
*** CR(I)3-33	96453550
*** CR(I)3-36	96453551

\*\*\*For 50 Hz operation only.

**Spare Part Kits** (continued)

STANDARD SHAFT SEAL KIT, BALANCED CARTRIDGE (Maximum allowed working PSI is 435) (Tandem Seal option Pumps require 2 of each Seal Kit)			Kit No.	96455088	Kit No.	96455089	Kit No.	96455086	Kit No.	96455087	Kit No.	96455082	Kit No.	96455083	Kit No.	96455084	Kit No.	96455085
Pos. No.	Description	Material No.	Qty. Included in each Kit															
105	HQBE	96441879	1															
	HQBV	96441880		1														
	HQQE	96441877			1													
	HQQV	96441878				1												
	HUBE	96441873					1											
	HUBV	96441874						1										
	HUUE	96441875							1									
	HUUV	96441876								1								
N/A	Grinding Device Tool for Emery Cloth	370711	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

OPTIONAL SHAFT SEAL KIT, BALANCED CARTRIDGE (Maximum allowed working PSI is 435) (Tandem Seal option Pumps require 2 of each Seal Kit)			Kit No.	96491375	Kit No.	96533327	Kit No.	96533326	Kit No.	96533323	Kit No.	96533322	Kit No.	96533325	Kit No.	96533324
Pos. No.	Description	Material No.	Qty. Included in each Kit													
105	HQBK	96489537	1													
	HQQF	96472620		1												
	HQQK	96498109			1											
	HUBF	96481464				1										
	HUBK	96481463					1									
	HUUF	96475542						1								
	HUUK	96498108							1							
N/A	Grinding Device Tool for Emery Cloth	370711	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N/A	Emery Cloth	370712	1	1	1	1	1	1	1	1	1	1	1	1	1	1

INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQE INBOARD SHAFT SEAL & Gasket KIT, Back to Back OQQV (An HQQx seal kit must also be used for a seal repair)			Kit No.	96533360	Kit No.	96533361
Pos. No.	Description	Material No.	Qty. Included in each Kit			
37	Sleeve O-ring, EPDM, ø137.5 x 3.3mm	96438743	3			
	Sleeve O-ring, FKM, ø137.5 x 3.3mm	96438744		3		
38, 100(a)	Drain Plug O-ring, EPDM, Ø16.3 x 2.4mm	00ID1288	7			
	Drain Plug O-ring, FKM, Ø16.3 x 2.4mm	00ID2231		7		
102	O-ring, EPDM, ø18 x 2.5mm	00ID2041	1			
	O-ring, FKM, ø17.86 x 2.62mm	00ID2187		1		
103	Stationary Seal Ring, SiC, 12mm	980746	1			
104	Rotating Seal Ring, SiC, 12mm	980733	1	1		
107	O-ring, EPDM, ø11.5 x 4.3mm	00ID2040	1			
	O-ring, FKM, ø11.5 x 4.3mm	00ID2186		1		
108	Spring, 12mm	980195	1	1		
109a	O-ring, EPDM, ø21.3 x 3.0mm	00ID1798	1			
	O-ring, FKM, ø21.2 x 3.0mm	00ID2339		1		
111	Driver for pos.104	980192	1	1		
112	Driver for pos.111	980191	1	1		
112a	Driver for pos.112	400203	1	1		
113	Set Screw for pos.112a	00ID7392	2	2		
146	Allen Bolt for pos.147 & 148, 2.5mm x M3 x 5mm	96462639	3	3		

IEC COUPLING KIT			Kit No.	415060	Kit No.	415061	Kit No.	415062	Kit No.	415063	Kit No.	415065
Pos. No.	Description	Material No.	Qty. Included in each Kit									
9	Allen Screw, M6 x 20mm, Delta Seal	00ID7899	4									
	Allen Screw, M8 x 25mm, Delta Seal	00ID7900		4	4	4						
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901									4	
10	Shaft Pin, ø5 x 26mm, Stainless	310192	1	1	1	1	1				1	
10a	Coupling Half, F85, MG71, .37-.55kW. ø14/ø12	410041	2									
	Coupling Half, F100, MG80, 75-1.1kW. ø19/ø12	410043		2								
	Coupling Half, F115, MG 90, 1.5-2.2kW. ø24/ø12	410045			2							
	Coupling Half, F130, MG100/112, 3-4 kW. ø28/ø12	410047				2						
	Coupling Half, F265, MG132, 5.5-7.5kW. ø38/ø12	410115									2	



**Spare Part Kits** (continued)

<b>NEMA COUPLING KIT</b>					
		<b>ø15.8/ø12</b>	<b>Kit No.</b>	<b>415314</b>	
		<b>ø28.5/ø12</b>	<b>Kit No.</b>	<b>415315</b>	
		<b>ø34.9/ø12</b>	<b>Kit No.</b>	<b>96478700</b>	
<b>Pos. No.</b>	<b>Description</b>	<b>Material No.</b>	<b>Qty. Included in each Kit</b>		
9	Allen Screw, M6 x 20mm, Delta Seal	00ID7899	4		
	Allen Screw, M8 x 25mm, Delta Seal	00ID7900		4	4
	Allen Screw, M10 x 25mm, Delta Seal	00ID7901			
10	Shaft Pin, ø5 x 26mm, Stainless	310192	1	1	1
10a	Coupling Half, 56C, 1/3 - 2HP. ø15.8 / ø12	410108	2		
	Coupling Half, 182/184TC, 3-5HP. ø28.5/ø12	410109		2	
	Coupling Half, 213TC, 7.5-10HP. ø34.9/ø12	96472175			2

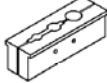



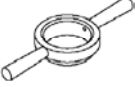



<b>OVAL FLANGE KIT FOR SMALL CR1S, 1, &amp; 3</b>					
		<b>1" Threaded Cast Iron (232 PSI Max.)</b>		<b>Kit No.</b>	<b>96474336</b>
<b>Pos. No.</b>	<b>Description</b>	<b>Material No.</b>	<b>Qty. Included in each Kit</b>		
12	Flange, Cast Iron, 1" - 11.5 NPT	96468333		2	
35	Hex Head Bolt, M10 x 40mm, Delta Seal	00ID8027		4	
39	Gasket , 95 x 55 x ø35 x 2mm, KLINGERSIL C4430	400189		2	

**Accessories**

<b>ANSI COMPANION FLANGES FOR SMALL CR</b>					
		<b>1-1/4" Threaded Cast Iron, 250 Lb. Class</b>		<b>Kit No.</b>	<b>91122260</b>
<b>Pos. No.</b>	<b>Description</b>	<b>Material No.</b>	<b>Qty. Included in each Kit</b>		
N/A	Nut, HEX 5/8"-11 UNC, Grade 2	00ID1510		8	
N/A	Plain Bolt, 5/8" x 2-1/2", Grade 2	00ID1920		8	
N/A	Flange, Cast Iron, 1-1/4"	00ID3650		2	
N/A	Gasket Full Face Flange, 1-1/4", 300#, Cut Ring	400201		2	

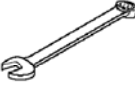






## Special Tools

Tools not generally available from normal sources.

Mat. No.	Description and Use	
00SV0040	<b>Shaft Holder for Dismantling/Assembly</b> Used to hold and protect the shaft during dismantling and assembly.	
00SV2007	<b>Tubular Box Spanner for Shaft Seal 36.1 mm</b> Used to install and remove the shaft seal. Fits a 1/2" drive ratchet.	
00SV0239	<b>Puller for Neck Ring</b> Used to remove the Neck Ring from Chamber.	
00SV2014	<b>Circlip Pliers for Flange Lock Ring</b> Used to remove the Lock Ring for the Flange.	
00SV2066	<b>Tool for Outer Sleeve</b> Used to press sleeve into base.	
00SV2011	<b>Bit Holder</b> Used with Bits Kit, 1/4"	 (optional)
00SV2010	<b>Bits Kit</b> NV 5 mm for M6, 1/4" NV 6 mm for M8, 1/4" NV 8 mm for M10, 1/4"	
00SV2012	<b>Hexagon Socket Bit</b> Used for Shaft Seal NV 2.5 mm for M5, 1/4"	

## Standard Tools

In addition to being available from Grundfos, comparable tools can be purchased through normal sources.

Mat. No.	Description and Use	
00SV0083 00SV0055 00SV0056 00SV0054 00SV0122	<b>Wrenches</b> Used to tighten various nuts. NV 10 mm for M6 NV 13 mm for M8 NV 17 mm for M10 NV 19 mm for M12 NV 24 mm for M16	
00SV0292 00SV0269 00SV0400	<b>Torque Wrench</b> Used to torque various screws. 4-20 Nm, 9 x 12 20-100 Nm, 9 x 12 40-200 Nm, 14x18	
00SV0438	<b>Torque Screwdriver</b> Used to tighten various nuts. 1-6 Nm, 1/4"	
00SV0295	<b>Ratchet Spanner for all Adapters</b> 9 mm x 12 mm, 1/2"	
00SV0296 00SV0297 00SV0298	<b>Socket Spanner with Inside Hex</b> NV 5 mm for M6, 1/2" x 1/2" NV 6 mm for M8, 1/2" x 1/2" NV 8 mm for M10, 1/2" x 1/2"	
00SV0310 00SV0294 00SV0270 00SV0271 00SV0524	<b>Ring Spanner</b> NV 10 mm for M6 NV 13 mm for M8 NV 17 mm for M10 NV 19 mm for M12 NV 24 mm for M16	
00SV2013	<b>Socket Spanner</b> NV 13 mm for M8, 9 x 12	



L-CR-5M-026 0504

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